

CLAIMS

5

1. A centrifugation device comprising a combined sample chamber and slide holder adapted to be mounted, with a microscope slide, in a centrifuge in a predetermined position, after placing, in the sample chamber, a fluid biological sample containing cells, the centrifugation device comprising an integrally moulded body affording a base adapted for engagement with a microscope slide, structure on one side of the base defining a chamber for a fluid sample, with an opening for the introduction of fluid to said chamber, the base including an aperture and carrying a means for sealing the edges of such aperture with respect to the surface of a microscope slide placed across the base, or for allowing the passage of liquid but obstructing the passage of cells, the centrifugation device further including a back plate connected with the base plate by an integral hinge and a latch mechanism formed integrally with the remainder of the device and arranged, when the back plate is closed against the rear of a microscope slide engaged with the base, to locate the slide between the base and the cover plate and to hold the cover plate in this closed position until fracture of a retaining element from the integrally moulded body.
2. A centrifugation device according to Claim 1 wherein the catch arrangement comprises a back plate detent carried by the back plate adjacent the free edge of the latter and which, in operation, co-operates, in the closed position of the device, with a complementary latch carried by the body of the device and connected with said body by an integral live hinge, the catch arrangement further comprising a shield element which, in the condition of the

10

device before use, is secured in a position in which it extends over the complementary latch at a predetermined distance from the integral live hinge of the said complementary latch, the arrangement being such that in the closed position, with the shield element still attached, the back plate detent is retained 5 between the shield element and the complementary latch and the shield element counteracts a turning moment applied to the complementary latch as a result of tension in the said back plate detent, whilst on breaking of a frangible retaining element holding the shield member in position relative to the device body, the shield element is able to move away from said complementary latch allowing 10 the latter to swing away from the back plate detent for release of the back plate detent to allow the back plate to swing away from the body of the device, and to allow removal of the microscope slide.

3. A centrifugation device according to Claim 2, wherein said 15 complementary latch is provided with a retaining arm which engages a face of said back plate detent to push the detent across the abutment face of the latch as the latch tilts outwardly and backwards during the release of the detent after rupture of the connection of the shield member with the body part, and thus to ensure release of the back plate detent from the latch.

20

4. A centrifugation device according to Claim 1, wherein said shield element is in the form of a lever which is pivotally connected with said body of the centrifugation device for pivoting about an axis generally perpendicular to the pivotal axis of the back plate with respect to said body defined by said 25 integral hinge and generally perpendicular to the direction of movement of said detent as it moves into engagement with said complementary latch, and wherein said frangible retaining element normally holds said lever against pivoting but, once fractured, allows said lever to pivot about its pivotal axis to move the part of said lever adjacent said latch away from said latch.

5. A centrifugation device according to Claim 4, wherein the pivotal connection of said lever with said body is also provided by a living integral hinge.

5

6. A centrifugation device according to Claim 4 or Claim 5, wherein said pivotal connection is intermediate opposite ends of said lever, said frangible connection is at one of said ends of said lever and said latch is located between said frangible connection and said pivotal connection, and wherein the other of
10 said end of said lever is free, whereby said frangible connection can be broken by pressing said other of said two ends of said lever towards said body portion, to swing said one end and the region of the lever between said one end and said pivotal connection, away from said latch.

15

7. A centrifugation device comprising a combined sample chamber and slide holder adapted to be mounted, with a microscope slide, in a centrifuge in a predetermined position, after placing, in the sample chamber, a fluid biological sample containing cells, the centrifugation device comprising an integrally moulded body affording a base adapted for engagement with a microscope
20 slide, structure on one side of the base defining a chamber for a fluid sample, with an opening for the introduction of fluid to said chamber, the base including an aperture and carrying a means for sealing the edges of such aperture with respect to the surface of a microscope slide placed across the base, or for allowing the passage of liquid but obstructing the passage of cells,
25 the centrifugation device further including a back plate connected with the base plate by an integral hinge and a latch mechanism formed integrally with the remainder of the device, wherein said means for sealing the edges of said aperture comprises an elastomeric gasket (20) carried by said base (14) and

12

encircling said aperture (18), for engagement with such microscope slide (26) placed across said base.

8. A centrifugation device according to Claim 7, wherein said elastomer is 5 an injection moulded elastomer and is moulded in situ with said body in a two-shot moulding process in which said body and back plate are formed in one moulding shot and the gasket is formed in the other moulding shot.

9. A centrifugation device according to Claim 7 or Claim 8 in which the 10 material of said gasket includes an oil component which, in use, forms an oil film on the microscope slide where the gasket contacts the slide, which soon act as a barrier to aqueous fluid and thus tends to prevent migration of such fluid past the region of the slides contacted by the gasket, after opening of the centrifugation device and removal of the slide.